

SAHIWAL BOARD

GRADE 9

BIOLOGY

2019 GROUP 1

MCQ'S

i) The study of fossils is called: (Mark 1)

- A. Taxonomy
- B. Paleontology
- C. Sociobiology
- D. Genetics

Answer:

- B. Paleontology

ii) The first step in solving biological problem is: (Mark 1)

- A. Experiment
- B. Formulation of hypothesis
- C. Observation
- D. Deduction

Answer:

- C. Observation

iii) Five kingdom classification system was introduced by: (Mark 1)

- A. E.Chatton
- B. Margulis
- C. Ibn Rushd
- D. Robert Whittaker

Answer:

- D. Robert Whittaker

iv) Nuclear envelop is absent in: (Mark 1)

- A. Monera
- B. Protista
- C. Fungi
- D. Plantae

Answer:

- A. Monera

v) Cell wall of prokaryotes is composed of: (Mark 1)

- A. Cellulose
- B. Peptidoglycan
- C. Chitin
- D. Plasmodes

Answer:

- B. Peptidoglycan

vi) Chromosomes are composed of: (Mark 1)

- A. DNA and protein
- B. Lipids
- C. DNA
- D. RNA

Answer:

- A. DNA and protein

vii) Cell dies each day by apoptosis in an adult human: (Mark 1)

- A. 50-100 billion
- B. 50-80 billion
- C. 50-90 billion
- D. 50-70 billion

Answer:

- D. 50-70 billion

viii) The enzymes lipase acts only on: (Mark 1)

- A. Starch
- B. Proteins
- C. Vitamins
- D. Lipids

Answer:

- D. Lipids

ix) ATP molecule was discovered by: (Mark 1)

- A. Lipmann
- B. Karl Lohmann
- C. Hamann
- D. Calvin

Answer:

- B. Karl Lohmann

x) Disease scurvy is caused by the deficiency of: (Mark 1)

- A. Vitamin A
- B. Vitamin B

- C. Vitamin C
- D. Vitamin D

Answer:

C. Vitamin C

xi) Myocardium means:

(Mark 1)

- A. Death of tissues
- B. Chyme
- C. Embolus
- D. Muscles of heart

Answer:

D. Muscles of heart

xii) The volume of blood in adult person is about:

(Mark 1)

- A. 4 liters
- B. 5 liters
- C. 6 liters
- D. 7 liters

Answer:

B. 5 liters

Section-A

Q.2 i) Write major biological issues of present age.

(Marks 2)

Q.2 ii) Differentiate between micro-molecules and macro-molecules.

(Marks 2)

Q.2 iii) Write any two characteristics of a good hypothesis.

(Marks 2)

Q.2 iv) Define biological method.

(Marks 2)

Q.2 v) What is meant by classification?

(Marks 2)

Q.2 vi) Differentiate between systematic and taxonomy.

(Marks 2)

Q.2 vii) Write two points of cell theory.

(Marks 2)

Q.2 viii) Define fluid mosaic model.

(Marks 2)

Q.3 i) What is the difference between somatic cells and germline cells?

(Marks 2)

Q.3 ii) Define Necrosis and write its two causes.

(Marks 2)

- Q.3 iii) How benign tumors are different from malignant tumors? (Marks 2)
- Q.3 iv) Define induced fit model of enzymes. (Marks 2)
- Q.3 v) What is meant by denaturation of enzymes. (Marks 2)
- Q.3 vi) Write the role of ATP for the cell. (Marks 2)
- Q.3 vii) Why it is incorrect to say that the energy relationship step of respiration is electron transport chain? (Marks 2)
- Q.3 viii) Define light reaction, Why it is called Z scheme? (Marks 2)
- Q.4 i) Write down the symptoms of scurvy. (Marks 2)
- Q.4 ii) Write the composition of gastric juice. (Marks 2)
- Q.4 iii) What do you know about appendix? (Marks 2)
- Q.4 iv) Define digestion. (Marks 2)
- Q.4 v) Describe the pulmonary circulation or circuit. (Marks 2)
- Q.4 vi) Differentiate between thrombus and embolus. (Marks 2)
- Q.4 viii) Write down two symptoms of dengue fever. (Marks 2)
- Q.4 vii) Write about the location of heart in human body. (Marks 2)
- Q.5 a) Describe five types of epithelial tissues. (Marks 5)
- Q.5 b) Describe the relationship of biology to other sciences with reference to inter disciplinary sciences. (Marks 4)
- Q.6 a) Define ATP. Discuss its composition by drawing its structure. (Marks 5)
- Q.6 b) Write any four characteristics of enzymes. (Marks 4)
- Q.7 a) Discuss cardiovascular disorders. (Marks 5)
- Q.7 b) Describe the importance of fertilizers. (Marks 4)

SAHIWAL BOARD

GRADE 9

BIOLOGY

2019 GROUP 2

MCQ'S

i) Which of the organelles have their own DNA: (Mark 1)

- A. Mitochondria
- B. Golgi bodies
- C. Vacuoles
- D. Centrioles

Answer:

- A. Mitochondria

ii) The movements of molecules from a region of lower concentration to higher concentration is called: (Mark 1)

- A. Osmosis
- B. Active transport
- C. Diffusion
- D. Filtration

Answer:

- B. Active transport

iii) Who introduced the system of classification of organisms for the first time: (Mark 1)

- A. Ernst Hackel
- B. Carlous Linnaeus
- C. Aristotle
- D. Robert Whittaker

Answer:

- C. Aristotle

iv) Scientific name of human being is: (Mark 1)

- A. *Homo sapiens*
- B. *Plasm sativum*
- C. *Rosa indica*

D. *Allium cepa*

Answer:

A. *Homo sapiens*

v) The bark of which tree was very effective for curing malaria: (Mark 1)

A. Cedrus

B. Cinchona

C. Pinus

D. Cactus

Answer:

B. Cinchona

vi) Bio-element is:

(Mark 1)

A. Aluminum

B. Cobalt

C. Bromine

D. Carbon

Answer:

D. Carbon

vii) The largest and strongest chamber in heart is:

(Mark 1)

A. Right atrium

B. Left atrium

C. Right ventricle

D. Left ventricle

Answer:

D. Left ventricle

viii) Which blood vessel carry de-oxygenated blood:

(Mark 1)

A. Renal artery

B. Pulmonary artery

C. Pulmonary vein

D. Aorta

Answer:

B. Pulmonary artery

ix) Elimination of undigested food from the body is called:

(Mark 1)

A. Ingestion

B. Absorption

C. Defection

D. Digestion

Answer:

C. Defection

x) The process of glycolysis occurs in: (Mark 1)

- A. Cytoplasm
- B. Mitochondria
- C. Nucleus
- D. Endoplasmic reticulum

Answer:

- A. Cytoplasm

xi) Induced fit model proposed by: (Mark 1)

- A. Emil Fischer
- B. Daniel Koshland
- C. Robert Hooke
- D. Schwann

Answer:

- B. Daniel Koshland

xii) Cell duplicates its chromosomes at this stage: (Mark 1)

- A. G-1 phase
- B. G-2 phase
- C. G-0 phase
- D. S-phase

Answer:

- D. S-phase

Section-B

Q.2 i) Describe any two applications of horticulture in daily life. (Marks 2)

Q.2 ii) Name any four unicellular organisms. (Marks 2)

Q.2 iii) Define quantitative and qualitative observations. (Marks 2)

Q.2 iv) Define bioinformatics. (Marks 2)

Q.2 v) Write down two characteristics of Kingdom Monera. (Marks 2)

Q.2 vi) Write down two principles of binomial nomenclature. (Marks 2)

Q.2 vii) What is active transport? (Marks 2)

Q.2 viii) Differentiate between primary and secondary cell wall. (Marks 2)

Q.3 i) What is meant by cell cycle? Write the name of its two phases. (Marks 2)

- Q.3 ii) What is the difference between karyokinesis and cytokinesis. (Marks 2)
- Q.3 iii) Define necrosis and write its two causes. (Marks 2)
- Q.3 iv) Differentiate between anabolism and catabolism. (Marks 2)
- Q.3 v) What is meant by optimum temperature? (Marks 2)
- Q.3 vi) Write the role of ATP for the cell. (Marks 2)
- Q.3 vii) What is the effect of light intensity and temperature on the rate of photosynthesis. (Marks 2)
- Q.3 viii) Differentiate between aerobic and anaerobic respiration. (Marks 2)
- Q.4 i) Write components of human food. (Marks 2)
- Q.4 ii) Differentiate between major minerals and trace minerals. (Marks 2)
- Q.4 iii) What is meant by vitamins? Write two functions of vitamin A. (Marks 2)
- Q.4 iv) Describe the role of iron in plant's life. (Marks 2)
- Q.4 v) Define the terms systole and diastole. (Marks 2)
- Q.4 vi) Write the factors which affect the rate of transpiration. (Marks 2)
- Q.4 vii) Define cohesion tension theory. (Marks 2)
- Q.4 viii) Write any two symptoms of the dengue fever. (Marks 2)
- Q.5 a) Describe any five differences between prokaryotic cells and eukaryotic cells. (Marks 5)
- Q.5 b) Write a note on organ and organ system level. (Marks 4)
- Q.6 a) Define photosynthesis, write its equation and describe the steps of dark reactions of photosynthesis. (Marks 5)
- Q.6 b) Describe any four characteristics of enzymes. (Marks 4)
- Q.7 a) Explain leukocytes. (Marks 5)
- Q.7 b) Write a note on ascorbic acid. (Marks 4)

